



INTERNATIONAL TELECOMMUNICATION UNION

DECEMBER 1997

DECEMBER 1997

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FINAL ACTS

of the World
Radiocommunication
Conference

WRC-97

2
Geneva, 1997

RESOLUTION [COM5-1] (WRC-97)

**CONSIDERATION BY A FUTURE COMPETENT WORLD RADIOCOMMUNICATION
CONFERENCE OF ISSUES DEALING WITH ALLOCATIONS TO SCIENCE SERVICES**

The World Radiocommunication Conference (Geneva, 1997),

considering

- a) that WRC-97 recognized the importance of proper consideration of science service issues based on technical and operational criteria developed in ITU-R study groups;
- b) that circumstances did not enable the completion of all necessary studies relating to a number of science proposals;
- c) that a deficiency in telecommand (uplink) frequency allocations exists, compared to available telemetry (downlink) allocations in the 100 MHz to 1 GHz range;
- d) that additional frequency bands above 71 GHz are needed to satisfy user requirements for passive sensing of the Earth's environmental conditions,

resolves

that, based on proposals from administrations and taking into account the results of studies in ITU-R study groups and the Conference Preparatory Meeting (CPM-99), the [1999] World Radiocommunication Conference should consider the following matters:

- 1) provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operations services in the frequency range 100 MHz to 1 GHz;
- 2) allocation of frequency bands above 71 GHz to the earth exploration-satellite (passive) and space research (passive) services and the radio astronomy service,

invites ITU-R study groups

to complete the necessary studies, as a matter of urgency, taking into account the present use of allocated bands, with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference,

instructs the Secretary-General

to bring this Resolution to the attention of the international and regional organizations concerned.

RESOLUTION [COM5-2]

**POSSIBLE EXTENSION OF THE SECONDARY ALLOCATION TO MOBILE
SATELLITE (EARTH-TO-SPACE) IN THE BAND 14.0 - 14.5 GHz TO COVER
AERONAUTICAL APPLICATIONS**

The World Radiocommunication Conference (Geneva 1997),

considering

- a) that the band 14.0 - 14.5 GHz was allocated to the land mobile satellite (Earth-to-space) on a secondary basis prior to WRC-97;
- b) that WRC-97 modified this allocation to the mobile satellite (Earth-to-space) except aeronautical, on a secondary basis;
- c) that the band 14.0 - 14.5 GHz is also allocated to the fixed satellite (Earth-to-space), radionavigation, fixed and mobile except aeronautical mobile;
- d) that there is a demand for possible use of the same type of terminals now used for land and maritime applications, on board aircraft to provide location and two way messaging functions;
- e) that such demand justifies the consideration of possible extension of the allocation to include aeronautical application at a future competent conference;
- f) that studies on the feasibility of such an extension must be completed before the relevant competent conference, with participation of ICAO and other relevant entities;
- g) that Recommendation 34 (WRC-95) states that future world radiocommunication conferences, whenever possible, should allocate frequency bands to the most broadly defined services with a view to providing the maximum flexibility in spectrum use,

resolves

that [WRC-99] shall examine the possibility of the extension of the secondary allocation to "mobile-satellite service (Earth-to-space) except aeronautical" in the 14.0 - 14.5 GHz band to incorporate aeronautical use, subject to the satisfactory outcome of technical compatibility studies,

resolves to invite ITU-R

to complete in time for [WRC-99] the technical and operational studies on the feasibility of sharing of the band 14.0 - 14.5 GHz between the services referred to in *considering* c) above and the aeronautical mobile-satellite service, on secondary basis,

instructs the Director

to invite the relevant organizations (e.g., ICAO) to participate in these studies.



INTERNATIONAL TELECOMMUNICATION UNION

FINAL ACTS

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Radiocommunications
Conference

WRC-97

Geneva, 1997

**FINAL ACTS
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World Radiocommunication Conference
(WRC-97) Geneva, 1997**

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**PREAMBLE
TO THE FINAL ACTS
EXPLANATORY NOTE**

PREAMBLE

The World Radiocommunication Conference (Geneva, 1997) resolved, by Resolution 718, to recommend to the Council that a world radiocommunication conference be held in Geneva in late 1997 for a period of four weeks.

The Council resolved, at its 1996 session by its Resolution 1086, that the Conference be convened in Geneva from 27 October to 21 November 1997 and established its agenda. The agenda, dates and place were approved by the required majority of the Members of the Union.

The World Radiocommunication Conference (WRC-97) met in Geneva for the stipulated period; it considered and held its work on the basis of the agenda approved by the Council. It adopted a revision of the Radio Regulations and Appendices thereto, as contained in the present Final Acts.

In accordance with its agenda, the Conference also took other decisions that it considered necessary or appropriate, including the review and revision of existing Resolutions and Recommendations and the adoption of various new Resolutions and Recommendations as contained in the present Final Acts.

The majority of the provisions revised by the World Radiocommunication Conference (Geneva, 1995 and Geneva, 1997) and contained in the revised Radio Regulations referred to in this Preamble shall apply provisionally as from 1 January 1999; the remaining provisions shall apply as from the special dates of application indicated in Article S59 of the revised Radio Regulations.

The delegates signing the revision of the Radio Regulations, contained in the present Final Acts, which is subject to approval by their competent authorities, declare that, should a Member of the Union make reservations concerning the application of one or more of the provisions of the revised Radio Regulations, no other Member shall be obliged to observe that provision or those provisions in its relations with that particular Member.

IN WITNESS WHEREOF, the delegates of the Members of the International Telecommunication Union named below have, on behalf of their respective competent authorities, signed one copy of the present Final Acts. In case of dispute, the French text shall prevail. This copy shall remain deposited in the archives of the Union. The Secretary-General shall forward one certified true copy to each Member of the International Telecommunication Union.

Done at Geneva, 21 November 1997

EXPLANATORY NOTE

The Final Acts are based on the Radio Regulations, as revised by the World Radiocommunication Conference (WRC-95) and published in Document 2 of the present Conference.

Considering the stringent time constraints, the Conference accepted that well-established abbreviations widely used and accepted in ITU may be used in the version of the Final Acts submitted for signing. The Secretary-General shall ensure, when preparing the published version of the Final Acts, that the abbreviations in question are written out in full, as appropriate, in line with the prevailing editorial rules applied in the instruments of the Union.

In accordance with No. 461 of the Convention, the Conference entrusted the final numbering of chapters, articles, paragraphs, resolutions and recommendations to the Secretary-General.

Should any editorial problems arise in the preparation of the definitive Final Acts of WRC-97, the Conference authorised the Secretary-General to resolve these, with the assistance of the Chairman and Vice-Chairmen of the Editorial Committee, and the relevant Committee Chairmen.

Pending preparation of the definitive version, texts in the Final Acts will retain their original numbering, together with the customary symbols in the left-hand margin identifying their source and the action which the Conference has taken on them.

These customary symbols are reproduced below:

- MOD Change to the substance of the text;
- SUP Deletion of a provision;
- SUP* Transfer elsewhere of a provision (appears at the point from which the provision has been transferred);
- ADD Addition of a new provision. The passages bear the number of the preceding provision in the original text, with the addition of "A", "B", etc.;
- (ADD) Transfer of a provision from elsewhere (appears at the point to which the provision has been transferred);
- (MOD) An editorial change to the text. The text was modified by the Editorial Committee to align the language or terminology used with another new or modified text.
- NOC No change.

Texts not modified (NOC) as well as texts deleted (SUP) by the WRC-97 are not reproduced in the present Final Acts.

PART I

Radio Regulations

ARTICLE S1

Terms and Definitions

- ADD S1.X** *High Altitude Platform Station:* A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth.
- ADD S1.109A** *Adaptive System:* A radiocommunication system which varies its radio characteristics according to channel quality.

ARTICLE S4

Assignment and Use of Frequencies

NOC **S4.1 - S4.3**

MOD S4.4 Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station, when using such a frequency assignment, shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.

NOC **S4.5 - S4.15**

ADD S4.15A Transmissions to or from high altitude platform stations shall be limited to bands specifically identified in Article S5.

NOC **S4.16 - S4.22**

ARTICLE S5

- MOD S5.55** *Additional allocation:* in Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 - 17 kHz is also allocated to the radionavigation service on a primary basis.
- MOD S5.56** The stations of services to which the bands 14 - 19.95 kHz and 20.05 - 70 kHz and in Region 1 also the bands 72 - 84 kHz and 86 - 90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.
- MOD S5.58** *Additional allocation:* in Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 67 - 70 kHz is also allocated to the radionavigation service on a primary basis.
- SUP S5.63**
- MOD S5.67** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Bulgaria, Kazakhstan, Moldova, Mongolia, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.
- MOD S5.73** The band 285 - 325 kHz (283.5 - 325 kHz in Region 1), in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service.

MOD

kHz
315 – 495

Allocation to Services		
Region 1	Region 2	Region 3
315 – 325 AERONAUTICAL RADIONAVIGATION Maritime Radionavigation (radiobeacons) S5.73 S5.72 S5.75	315 – 325 MARITIME RADIONAVIGATION (radiobeacons) S5.73 Aeronautical Radionavigation	315 – 325 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) S5.73
325 – 405 AERONAUTICAL RADIONAVIGATION S5.72	325 – 335 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile Maritime Radionavigation (radiobeacons)	325 – 405 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile
	335 – 405 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile	
405 – 415 RADIONAVIGATION S5.76 S5.72	405 – 415 RADIONAVIGATION S5.76 Aeronautical Mobile	
415 – 435 MARITIME MOBILE S5.79 AERONAUTICAL RADIONAVIGATION S5.72	415 – 495 MARITIME MOBILE S5.79 ADD S5.79A Aeronautical Radionavigation S5.80 S5.77 S5.78 S5.81 S5.82	
435 – 495 MARITIME MOBILE S5.79 ADD S5.79A Aeronautical Radionavigation S5.72 S5.81 S5.82		

- ADD S5.79A** When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution 339 (Rev.WRC-97)).
- MOD S5.81** The bands 490 - 495 kHz and 505 - 510 kHz shall be subject to the provisions of Appendix S13, paragraph 15(1), Part A2.
- MOD S5.82** In the maritime mobile service, the frequency 490 kHz is, from the date of full implementation of the GMDSS (see Resolution 331 (Rev.WRC-97)), to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles S31 and S52. In using the band 415 - 495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz.

MOD

kHz
495 – 1 606.5

Allocation to Services		
Region 1	Region 2	Region 3
495 – 505	MOBILE (distress and calling) S5.83	
505 – 526.5 MARITIME MOBILE S5.79 ADD S5.79A S5.84 AERONAUTICAL RADIONAVIGATION S5.72 S5.81	505 – 510 MARITIME MOBILE S5.79 S5.81	505 – 526.5 MARITIME MOBILE S5.79 ADD S5.79A S5.84 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile Land Mobile S5.81
	510 – 525 MOBILE ADD S5.79A S5.84 AERONAUTICAL RADIONAVIGATION	
	525 – 535 BROADCASTING S5.86 AERONAUTICAL RADIONAVIGATION	526.5 – 535 BROADCASTING Mobile S5.88
526.5 – 1 606.5 BROADCASTING S5.87 ADD S5.87A	535 – 1 605 BROADCASTING	535 – 1 606.5 BROADCASTING

MOD S5.84

The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles S31 and S52 and in Appendix S13.

ADD S5.87A

Additional allocation: in Uzbekistan, the band 526.5 - 1 606.5 kHz is also allocated to the radionavigation service on a primary basis. Such use is subject to agreement obtained under Article 14/S9.21 with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of its lifetime.

- MOD S5.91** *Additional allocation:* in the Philippines and Sri Lanka, the band 1 606.5 - 1 705 kHz is also allocated to the broadcasting service on a secondary basis.
- MOD S5.98** *Alternative allocation:* in Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Eritrea, Spain, Ethiopia, Georgia, Greece, Italy, Kazakstan, Lebanon, Lithuania, Moldova, the Netherlands, Syria, Kyrgyzstan, Russia, Somalia, Tajikistan, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810 - 1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- MOD S5.99** *Additional allocation:* in Saudi Arabia, Bosnia and Herzegovina, Iraq, Libya, Uzbekistan, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- MOD S5.107** *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya, Somalia, Swaziland and Zambia, the band 2 160 - 2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.
- MOD S5.112** *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Denmark, France, Greece, Iceland, Italy, Malta, Norway, Sri Lanka, Turkey and Yugoslavia, the band 2 194 - 2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- MOD S5.114** *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Denmark, France, Greece, Iraq, Italy, Malta, Norway, Turkey and Yugoslavia, the band 2 502 - 2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- MOD S5.117** *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Côte d'Ivoire, Denmark, Egypt, France, Greece, Iceland, Italy, Liberia, Malta, Norway, Sri Lanka, Togo, Turkey and Yugoslavia, the band 3 155 - 3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD

kHz
4 063 – 5 450

Allocation to Services		
Region 1	Region 2	Region 3
4 063 – 4 438	MARITIME MOBILE ADD S5.79A S5.109 S5.110 S5.130 S5.131 S5.132 S5.128 S5.129	
4 438 – 4 650 FIXED MOBILE except aeronautical mobile (R)	4 438 – 4 650 FIXED MOBILE except aeronautical mobile	
4 650 – 4 700	AERONAUTICAL MOBILE (R)	
4 700 – 4 750	AERONAUTICAL MOBILE (OR)	
4 750 – 4 850 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING S5.113	4 750 – 4 850 FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113	4 750 – 4 850 FIXED BROADCASTING S5.113 Land Mobile
4 850 – 4 995	FIXED LAND MOBILE BROADCASTING S5.113	
4 995 – 5 003	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)	
5 003 – 5 005	STANDARD FREQUENCY AND TIME SIGNAL Space Research	
5 005 – 5 060	FIXED BROADCASTING S5.113	
5 060 – 5 250	FIXED Mobile except aeronautical mobile S5.133	
5 250 – 5 450	FIXED MOBILE except aeronautical mobile	

- MOD S5.128** In Afghanistan, Argentina, Armenia, Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakhstan, Mali, Niger, Kyrgyzstan, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063 - 4 123 kHz, 4 130 - 4 133 kHz and 4 408 - 4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.
- MOD S5.131** The frequency 4 209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques.
- MOD S5.134** The use of the bands 5 900 - 5 950 kHz, 7 300 - 7 350 kHz, 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 13 570 - 13 600 kHz, 13 800 - 13 870 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz by the broadcasting service is limited to single-sideband emissions with the characteristics specified in Appendix S11 to the Radio Regulations or to any other spectrum-efficient modulation techniques recommended by ITU-R. Access to these bands shall be subject to the decisions of a competent conference.
- SUP S5.135**
- MOD S5.141** *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya and Madagascar, the band 7 000 - 7 050 kHz is allocated to the fixed service on a primary basis.
- SUP S5.148**
- MOD S5.149** In making assignments to stations of other services to which the bands:

13 360 - 13 410 kHz,	4 950 - 4 990 MHz,	93.07 - 93.27 GHz*,
25 550 - 25 670 kHz,	4 990 - 5 000 MHz,	97.88 - 98.08 GHz*,
37.5 - 38.25 MHz,	6 650 - 6 675.2 MHz*,	140.69 - 140.98 GHz*,
73 - 74.6 MHz in	10.6 - 10.68 GHz,	144.68 - 144.98 GHz*,
Regions 1 and 3,	14.47 - 14.5 GHz*,	145.45 - 145.75 GHz*,
150.05 - 153 MHz in	22.01 - 22.21 GHz*,	146.82 - 147.12 GHz*,
Region 1,	22.21 - 22.5 GHz,	150 - 151 GHz*,
322 - 328.6 MHz*,	22.81 - 22.86 GHz*,	174.42 - 175.02 GHz*,
406.1 - 410 MHz,	23.07 - 23.12 GHz*,	177 - 177.4 GHz*,
608 - 614 MHz in	31.2 - 31.3 GHz,	178.2 - 178.6 GHz*,
Regions 1 and 3,	31.5 - 31.8 GHz in	181 - 181.46 GHz*,
1 330 - 1 400 MHz*,	Regions 1 and 3,	186.2 - 186.6 GHz*,
1 610.6 - 1 613.8 MHz*,	36.43 - 36.5 GHz*,	250 - 251 GHz*,
1 660 - 1 670 MHz,	42.5 - 43.5 GHz,	257.5 - 258 GHz*,
1 718.8 - 1 722.2 MHz*,	42.77 - 42.87 GHz*,	261 - 265 GHz,
2 655 - 2 690 MHz,	43.07 - 43.17 GHz*,	262.24 - 262.76 GHz*,
3 260 - 3 267 MHz*,	43.37 - 43.47 GHz*,	265 - 275 GHz,
3 332 - 3 339 MHz*,	48.94 - 49.04 GHz*,	265.64 - 266.16 GHz*,
3 345.8 - 3 352.5 MHz*,	72.77 - 72.91 GHz*,	267.34 - 267.86 GHz*,
4 825 - 4 835 MHz*,		271.74 - 272.26 GHz*

are allocated (* indicates radio astronomy use for spectral line observations), administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. S4.5 and S4.6 and Article S29).

MOD S5.152

Additional allocation: in Armenia, Azerbaijan, China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 250 - 14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.

MOD S5.154

Additional allocation: in Armenia, Azerbaijan, Georgia, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 18 068 - 18 168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW.

MOD

MHz
40.98 – 68

Allocation to Services		
Region 1	Region 2	Region 3
44 - 47	FIXED MOBILE S5.162 ADD S5.162A	
47 - 68 BROADCASTING	47 - 50 FIXED MOBILE	47 - 50 FIXED MOBILE BROADCASTING
	50 - 54 AMATEUR S5.166 S5.167 S5.168 S5.170	
	54 - 68 BROADCASTING Fixed Mobile S5.163 S5.164 S5.165 S5.169 S5.171 ADD S5.162A	54 - 68 FIXED MOBILE BROADCASTING

MOD S5.160

Additional allocation: in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, Swaziland and Zaire, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

ADD S5.162A

Additional allocation: in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Norway, Netherlands, Poland, Portugal, Slovakia, the Czech Republic, the United Kingdom, Russia, Sweden, Switzerland and Turkey, the band 46 - 68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution COM5-5 (WRC-97).

- MOD S5.164** *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Côte d'Ivoire, Denmark, Spain, Finland, France, Gabon, Greece, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, Syria, the United Kingdom, Senegal, Slovenia, Sweden, Switzerland, Swaziland, Togo, Tunisia, Turkey and Yugoslavia, the band 47 - 68 MHz, in Romania, the band 47 -58 MHz, and in the Czech Republic the band 66 - 68 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band.
- MOD S5.174** *Alternative allocation:* in Bulgaria, Hungary, Poland and Romania, the band 68 - 73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference (Geneva, 1960).
- MOD S5.177** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. S9.21.
- MOD S5.181** *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Syria, Sweden and Switzerland, the band 74.8 - 75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. S9.21. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. S9.21.
- MOD S5.184** *Additional allocation:* in Bulgaria and Romania, the band 76 - 87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).
- SUP S5.186**
- MOD S5.190** *Additional allocation:* in Monaco, the band 87.5 - 88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. S9.21.

- MOD S5.192** *Additional allocation:* in China and the Republic of Korea, the band 100 - 108 MHz is also allocated to the fixed and mobile services on a primary basis.
- MOD S5.194** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Kazakstan, Lebanon, Moldova, Mongolia, Uzbekistan, Syria, Kyrgyzstan, Russia, Somalia, Tajikistan, Turkmenistan, Turkey and Ukraine, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis.
- MOD S5.197** *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, France, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Syria, and Sweden, the band 108 - 111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. S9.21. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedures invoked under No. S9.21.

MOD

MHz
75.2 – 137

Allocation to Services		
Region 1	Region 2	Region 3
117.975 – 136	AERONAUTICAL MOBILE (R) S5.111 MOD S5.198 S5.199 S5.200 S5.201	
136 – 137	AERONAUTICAL MOBILE (R) MOD S5.202 MOD S5.203 ADD S5.203A ADD S5.203B	

- MOD S5.198** *Additional allocation:* the band 117.975 - 136 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis, subject to agreement obtained under Article 14/No. S9.21.
- MOD S5.201** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Latvia, Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 132 - 136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

- MOD S5.202** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, United Arab Emirates, Georgia, the Islamic Republic of Iran, Jordan, Kazakhstan, Latvia, Moldova, Oman, Uzbekistan, Poland, Syria, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan, Turkey and Ukraine, the band 136 - 137 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.
- MOD S5.203** In the band 136 - 137 MHz, existing operational meteorological satellites may continue to operate, under the conditions defined in No. S4.4 with respect to the aeronautical mobile service, until 1 January 2002. Administrations shall not authorize new frequency assignments in this band to stations in the meteorological-satellite service.
- ADD S5.203A** *Additional allocation:* in Israel, Mauritania, Qatar and Zimbabwe, the band 136 - 137 MHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a secondary basis until 1 January 2005.
- ADD S5.203B** *Additional allocation:* in Saudi Arabia, United Arab Emirates, Jordan, Oman and Syria, the band 136 - 137 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis until 1 January 2005.
- MOD S5.208** The use of the band 137 - 138 MHz by the mobile-satellite service is subject to coordination under Resolution 46 (Rev.WRC-97)/No. S9.11A.
- MOD S5.208A** In making assignments to space stations in the mobile-satellite service in the bands 137 - 138 MHz, 387 - 390 MHz and 400.15 - 401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05 - 153 MHz, 322 - 328.6 MHz, 406.1 - 410 MHz and 608 - 614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in Table 1 of Recommendation ITU-R RA.769-1.
- MOD S5.209** The use of the bands 137 - 138 MHz, 148 - 150.05 MHz, 399.9 - 400.05 MHz, 400.15 - 401 MHz, 454 - 456 MHz and 459 - 460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems.
- MOD S5.210** *Additional allocation:* in Austria, France, Italy, Liechtenstein, Slovakia, the Czech Republic, the United Kingdom and Switzerland, the bands 138 - 143.6 MHz and 143.65 - 144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis.

MOD

MHz
148 – 156.8375

Allocation to Services		
Region 1	Region 2	Region 3
149.9 – 150.05	MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ADD S5.224A RADIONAVIGATION-SATELLITE ADD S5.224B MOD S5.220 S5.222 S5.223	

(MOD) S5.219

The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution 46 (Rev.WRC-97)/No. S9.11A. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz.

MOD S5.220

The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the mobile-satellite service is subject to coordination under Resolution 46 (Rev.WRC-97)/No. S9.11A. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz.

***MOD S5.221**

Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo, the Republic of Korea, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, the Islamic Republic of Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, the United Kingdom, Russia, Senegal, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Yugoslavia, Zambia, and Zimbabwe.

SUP S5.224